

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. (Cancelled)

1 2. (Currently Amended) The method of claim [[1]] 12, wherein sending the request
2 comprises sending the request in a random access channel.

1 3. (Original) The method of claim 2, wherein sending the request comprises sending
2 a predefined code in a random access channel of an Enhanced General Packet Radio Services
3 system.

1 4. (Original) The method of claim 3, wherein sending the code comprises sending
2 the code in a channel selected from the group consisting of a RACH, PRACH, and CPRACH.

1 5. (Cancelled)

1 6. (Currently Amended) ~~The method of claim 5,~~ A method of establishing a call in a
2 wireless network, comprising:
3 sending a request for a packet-switched call over the wireless network;
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call; and
6 retrieving a pre-assigned code to send in the request,
7 wherein retrieving the pre-assigned code comprises retrieving a random access
8 channel mobile station code.

1 7. (Currently Amended) The method of claim [[1]] 12, wherein communicating the
2 control signaling comprises communicating the control signaling in a packet data traffic channel.

1 8. (Original) The method of claim 7, wherein communicating the control signaling
2 comprises communicating the control signaling in PDTCH bursts of an Enhanced General Packet
3 Radio Services system.

1 9. (Currently Amended) ~~The method of claim 7,~~ A method of establishing a call in a
2 wireless network, comprising:

3 sending a request for a packet-switched call over the wireless network; and
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call,

6 wherein communicating the control signaling comprises communicating the
7 control signaling in a packet data traffic channel,

8 wherein communicating the control signaling comprises communicating the
9 control signaling in a packet data traffic channel mapped to a dedicated physical channel.

1 10. (Original) The method of claim 9, further comprising communicating bearer
2 traffic in another traffic channel mapped to the dedicated physical channel.

1 11. (Original) The method of claim 10, wherein communicating the control signaling
2 comprises communicating the control signaling in a PDTCH, and wherein communicating the
3 bearer traffic comprises communicating the bearer traffic in a TCH, the PDTCH and TCH
4 defined according to an Enhanced General Packet Radio Services protocol.

1 12. (Currently Amended) ~~The method of claim 1,~~ A method of establishing a call in a
2 wireless network, comprising:

3 sending a request for a packet-switched call over the wireless network; and
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call,

6 wherein communicating the control signaling comprises communicating Session
7 Initiation Protocol messages in the traffic channel.

1 13. (Previously Presented) The method of claim 12, wherein communicating the
2 control signaling comprises communicating a Session Initiation Protocol Invite request in the
3 traffic channel.

1 14. (Currently Amended) ~~The method of claim 1, further comprising~~ A method of
2 establishing a call in a wireless network, comprising:
3 sending a request for a packet-switched call over the wireless network;
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call; and
6 sending a release message to terminate the packet-switched call in a traffic
7 channel.

1 15. (Previously Presented) The method of claim 14, wherein sending the release
2 message comprises sending a Session Initiation Protocol Bye message in the traffic channel.

1 16. (Currently Amended) ~~The method of claim 1, further comprising~~ A method of
2 establishing a call in a wireless network, comprising:
3 sending a request for a packet-switched call over the wireless network;
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call; and
6 sending quality-of-service related messages in a traffic channel.

1 17. (Original) The method of claim 16, wherein sending the quality-of-service related
2 messages comprises sending Resource Reservation Protocol messages.

1 18. (Currently Amended) The method of claim [[1]] 12, wherein communicating the
2 control signaling comprises communicating the control signaling in PDTCH bursts, the method
3 further comprising communicating bearer traffic in TCH bursts.

1 19. (Currently Amended) The method of claim [[1]] 12, wherein communicating the
2 control signaling comprises communicating the control signaling in PDTCH bursts, the method
3 further comprising communicating bearer traffic in PDTCH bursts.

1 20. (Cancelled)

1 21. (Currently Amended) The article of claim [[20]] 22, wherein the instructions
2 when executed cause the controller to send the control signaling selected from the group
3 consisting of RACH, PRACH, and CPRACH.

1 22. (Currently Amended) ~~The article of claim 20, wherein the instructions when~~
2 ~~executed cause the controller to further~~ An article comprising one or more storage media
3 containing instructions that when executed cause a controller to:

4 send control signaling to request a channel for a packet-switched call over a
5 wireless network;

6 add a predetermined code into the control signaling to identify the call as a
7 packet-switched call; and

8 communicate packet-switched call control signaling in traffic channels of the
9 wireless network.

1 23. (Currently Amended) The article of claim [[20]] 22, wherein the instructions
2 when executed cause the controller to communicate the packet-switched call control signaling by
3 communicating Session Initiation Protocol messages in traffic channels of the wireless network.

1 24. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate the Session Initiation Protocol messages in PDTCH bursts of a
3 General Packet Radio Services system.

1 25. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate a Session Initiation Protocol Invite message.

1 26. (Original) The article of claim 25, wherein the instructions when executed cause
2 the controller to receive response messages to the Invite message.

1 27. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate a Session Initiation Protocol Bye message to release a call.

1 28. (Original) The article of claim 23, wherein the instructions when executed cause
2 the controller to communicate messages to provide a supplementary service.

1 29. – 30. (Cancelled)

1 31. (Currently Amended) ~~The mobile station of claim 30,~~ A mobile station for use in
2 a wireless communications system having base stations, comprising:

3 a storage element storing a predetermined code associated with packet-switched
4 calls; and

5 a controller to send control signaling to one of the base stations over a wireless
6 link to set up a packet-switched call,

7 the control signaling containing the predetermined code, the predetermined code
8 to identify the call as a packet-switched call,

9 wherein the control signaling comprises a random access channel, the random
10 access channel containing the predetermined code,

11 wherein the random access channel comprises a packet random access channel,
12 the packet random access channel containing the predetermined code.

1 32. (Previously Presented) The mobile station of claim 31, wherein the packet
2 random access channel comprises a COMPACT packet random access channel, the COMPACT
3 packet random access channel containing the predetermined code.

1 33. (Cancelled)

1 34. (Previously Presented) A radio network control system, comprising:
2 an interface to a wireless link capable of communicating with a mobile station;
3 and
4 a controller adapted to receive a request to set up a packet-switched call over the
5 wireless link,
6 the controller further adapted to assign a logical channel combination in response
7 to the request,
8 wherein the logical channel combination comprises TCH + FACCH + SACCH +
9 PDTCH + PACCH + PTCCH.

1 35. (Previously Presented) The radio network control system of claim 34, wherein
2 the controller is adapted to communicate Session Initiation Protocol messages in PDTCH bursts.

1 36. (Original) The radio network control system of claim 34, wherein the controller
2 is adapted to communicate a success indication of a packet-switched call session in a PACCH
3 burst.

1 37. (Original) The radio network control system of claim 34, wherein the controller
2 is adapted to communicate radio resource management signaling in a PACCH burst to indicate a
3 state of the packet-switched call.

1 38. (Cancelled)

1 39. (Currently Amended) ~~The data signal of claim 38, wherein the instructions when~~
2 ~~executed cause the system to further~~ A data signal embodied in a carrier wave and containing
3 instructions that when executed cause a system in a wireless network to:
4 receive control signaling to set up a packet-switched call over the wireless
5 network, the control signaling carried in a first traffic channel;
6 establish the packet-switched call over the wireless network; and
7 communicate bearer data in a second traffic channel.

1 40. (Original) The data signal of claim 39, wherein the control signaling is carried in
2 a PDTCH and the bearer data is carried in a TCH.

1 41. (Currently Amended) ~~The data signal of claim 38, wherein the instructions when~~
2 ~~executed cause the system to further~~ A data signal embodied in a carrier wave and containing
3 instructions that when executed cause a system in a wireless network to:
4 receive control signaling to set up a packet-switched call over the wireless
5 network, the control signaling carried in a first traffic channel;
6 establish the packet-switched call over the wireless network; and
7 communicate bearer data in the first traffic channel.

1 42. (Currently Amended) ~~The method of claim 1,~~ A method of establishing a call in a
2 wireless network, comprising:
3 sending a request for a packet-switched call over the wireless network; and
4 communicating control signaling in a traffic channel of the wireless network to
5 establish the packet-switched call,
6 wherein communicating the control signaling in the traffic channel comprises
7 communicating a control message in the traffic channel, the control message according to a
8 protocol for establishing a packet-switched call over an Internet Protocol network.

1 43. (Currently Amended) The data signal of claim ~~[[38]]~~ 39, wherein receiving the
2 control signaling comprises receiving a Session Initiation Protocol message carried in the first
3 traffic channel.

1 44. (Currently Amended) The data signal of claim ~~[[38]]~~ 41, wherein receiving the
2 control signaling comprises receiving a control message carried in the first traffic channel, the
3 control message according to a protocol for establishing a packet-switched call over an Internet
4 Protocol network.

1 45. (Previously Presented) The article of claim 21, wherein the predetermined code
2 comprises a mobile station code.